

MIDWEST WIRELINE

DUAL INDUCTION
LOG

Company RAMA Operating Co., Inc.		Company RAMA Operating Co., Inc.	
Well	HJB #1-20	Well	HJB #1-20
Field	Mueller	Field	Mueller
County	Stafford	County	Stafford
State	Kansas	State	Kansas
Location: API #: 15-185-24082-00-00		Other Services	
SEC 20 TWP 21S RGE 12W		CNL/CDL MEL	
Permanent Datum	Ground Level	Elevation	1856'
Log Measured From	Kelly Bushing	K.B.	1867'
Drilling Measured From	Kelly Bushing	D.F.	N/A
		G.L.	1856'
Date	7/21/2021		
Run Number	One		
Depth Driller	3700'		
Depth Logger	3700'		
Bottom Logged Interval	3699'		
Top Log Interval	300'		
Casing Driller	8.625" @ 330'		
Casing Logger	329'		
Bit Size	7.875"		
Type Fluid in Hole	Chemical		
Salinity, ppm CL	7500		
Density / Viscosity	9.2 66		
pH / Fluid Loss	9.0 10.4		
Source of Sample	FLOWLINE		
Rm @ Meas. Temp	0.30 @ 70		
Rmt @ Meas. Temp	0.23 @ 70		
Rmc @ Meas. Temp	0.41 @ 70		
Source of Rmt / Rmc	CHARTS		
Rm @ BHT	0.19 @ 113		
Operating Rig Time	3 Hours		
Max Rec. Temp. F	113		
Equipment Number	P-24		
Location	HAYS		
Recorded By	D. Schmidt		
Witnessed By	Josh Austin		

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All interpretations are opinions based on inferences from electrical or other measurements and Midwest Wireline LLC cannot and does not guarantee the accuracy or correctness of any interpretation, and Midwest Wireline LLC will not be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees.

Comments

N/A DENOTES NOT AVAILABLE OR NON-APPLICABLE.

Great Bend,
South to County Line, South to 180th,
4 1/4 East, South into

Log Measured From: Kelly Bushing 11 Ft. Above Permanent Datum

THANK YOU FOR USING MIDWEST WIRELINE LLC
785-625-3858

Your Midwest Wireline Crew		This Log Record Was Witnessed By	
Engineer: D. Schmidt		Primary Witness: Josh Austin	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	
Operator:		Secondary Witness:	

Sensor	Offset (ft)	Schematic		Description	Length (ft)	O.D. (in)	Weight (lb)	
GR	40.58			GR-M&W (233-M&W)	3.00	3.50	50.00	
CNLSC CNSSC	37.48 36.73			CNT-M&W (207-MW)	5.50	3.50	100.00	
LSD DCAL SSD	28.43 28.42 27.93			CDL-M&W (934-226)	8.50	4.00	250.00	
MCAL MI MN	19.83 19.83 19.83			ML-PSIML (PSI-01) GO Micro log tools converted to Simplec electronics	7.58	4.00	65.00	
RLL3F RLL3	15.80 15.80							
CILD	8.00			DIL-PSI HIGH TEMP (952-828)	18.50	3.50	220.00	
CILM	4.70							
SP	0.20							
Dataset: rama_hjb 1-20.db: field/well/stkml/pass3.3								
Total length: 43.08 ft								
Total weight: 685.00 lb								
O.D.: 4.00 in								

Log Variables

DatabaseC:\ProgramData\Warrior\Data\rama_hjb 1-20.db
Dataset field/well/stkml/pass3.3/_vars_

Top - Bottom

A	BOREID	BOTTEMP	CASEOD	CASETHCK	FLUIDDEN	M	MATRXDEN
1	in 7.875	degF 113	in 5.5	in 0	g/cc 1	2	g/cc 2.71
NPORSEL	PERFS	SNDERR	SNDERRM	SPSHIFT	SRFTEMP	SZCOR	TDEPTH
Limestone	No	mmho/m 0	mmho/m 0	mV 268	degF 70	Off	ft 3700

Variable Description

A : Cement Factor (a)
BOREID : Borehole I.D.
BOTTEMP : Bottom Hole Temperature
CASEOD : Casing O.D.
CASETHCK : Casing Thickness
FLUIDDEN : Fluid Density
M : Cement Exp (m)
MATRXDEN : Matrix Density

NPORSEL : Neutron Porosity Curve Select
PERFS : Perforation Flag
SNDERR : Deep Sonde Error Correction
SNDERRM : Medium Sonde Error Correction
SPSHIFT : S.P. Baseline Offset
SRFTEMP : Surface Temperature
SZCOR : CN Size Cor. ?
TDEPTH : Total Depth

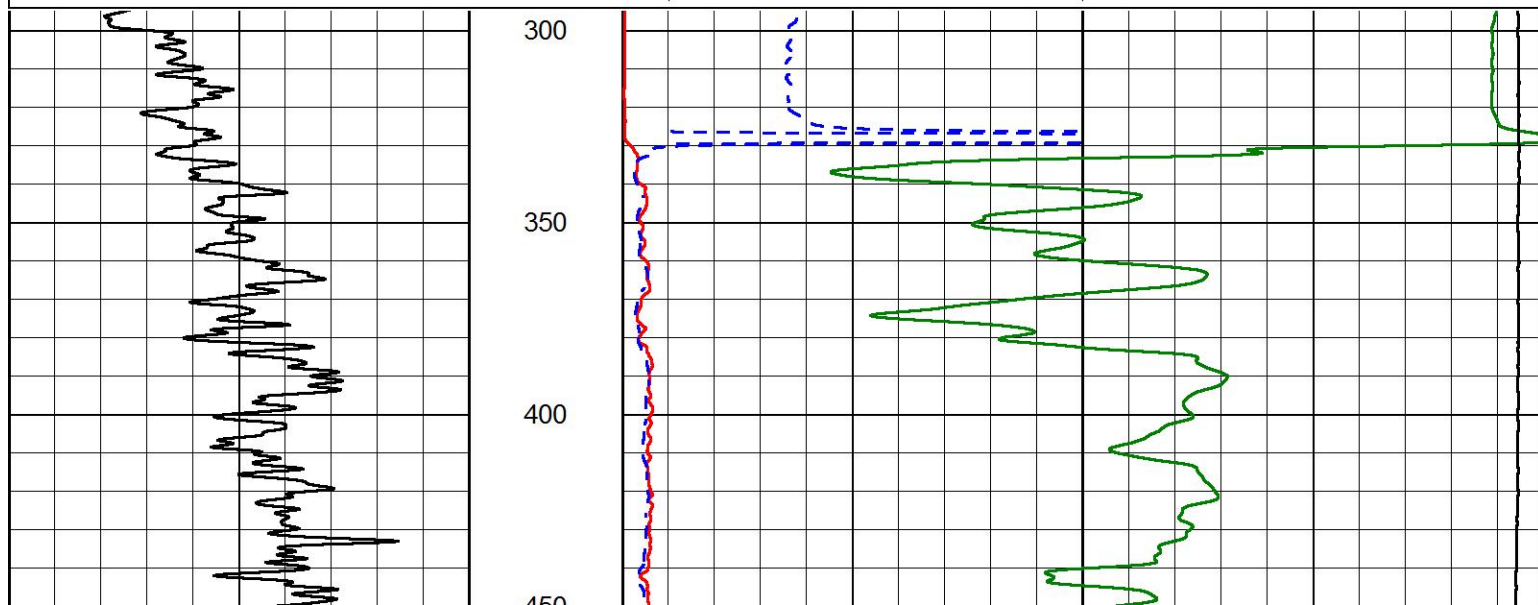


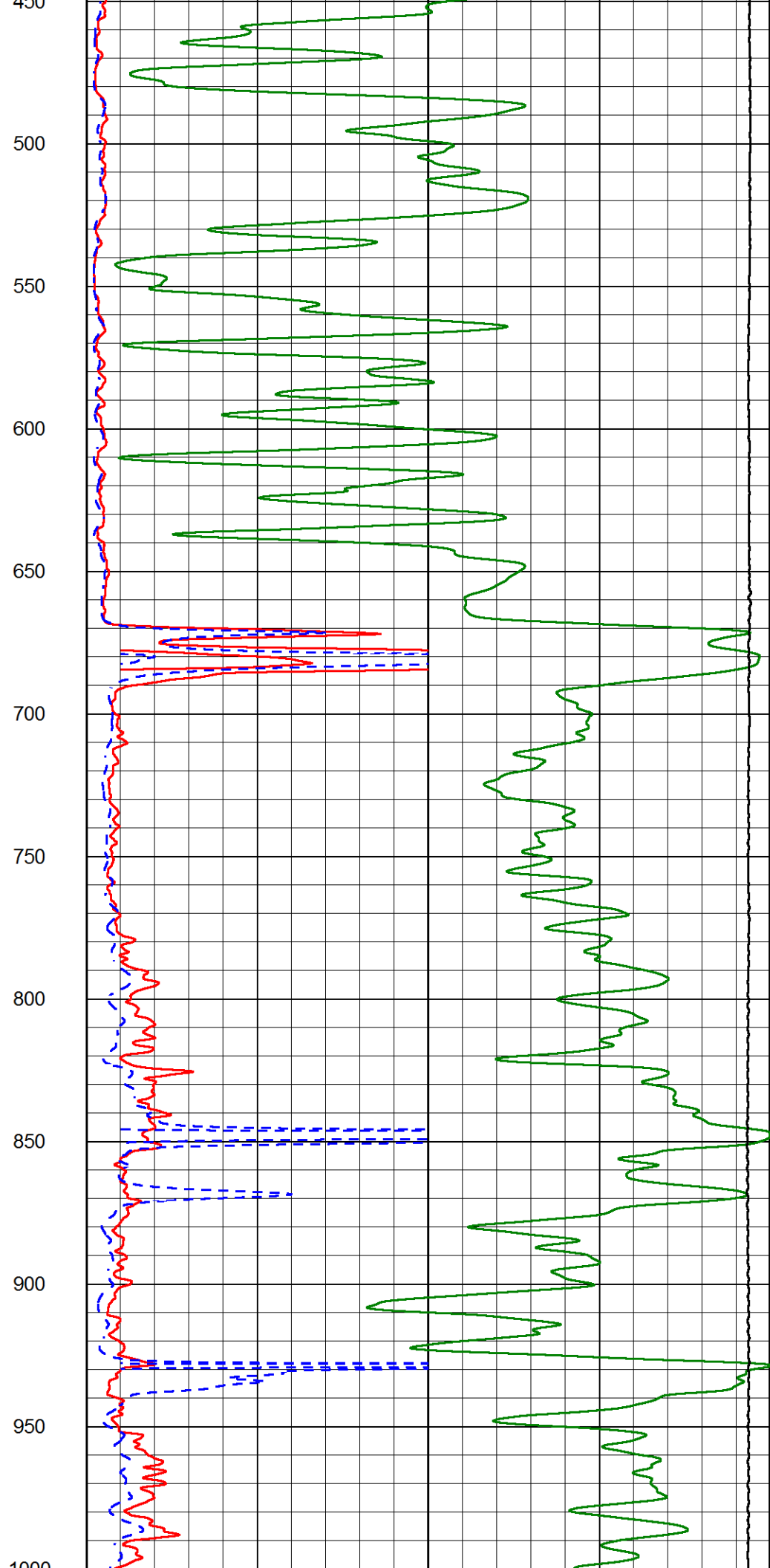
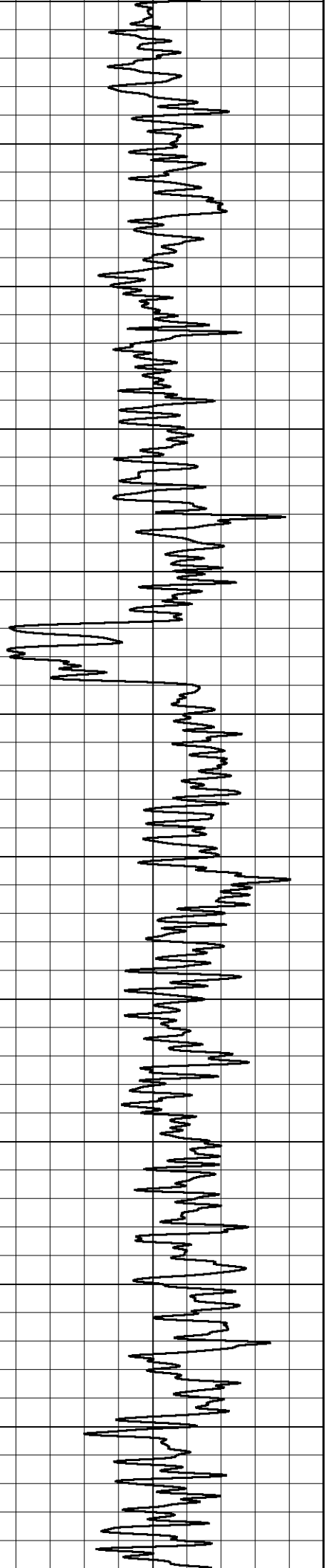
2" SCALE RESISTIVITY

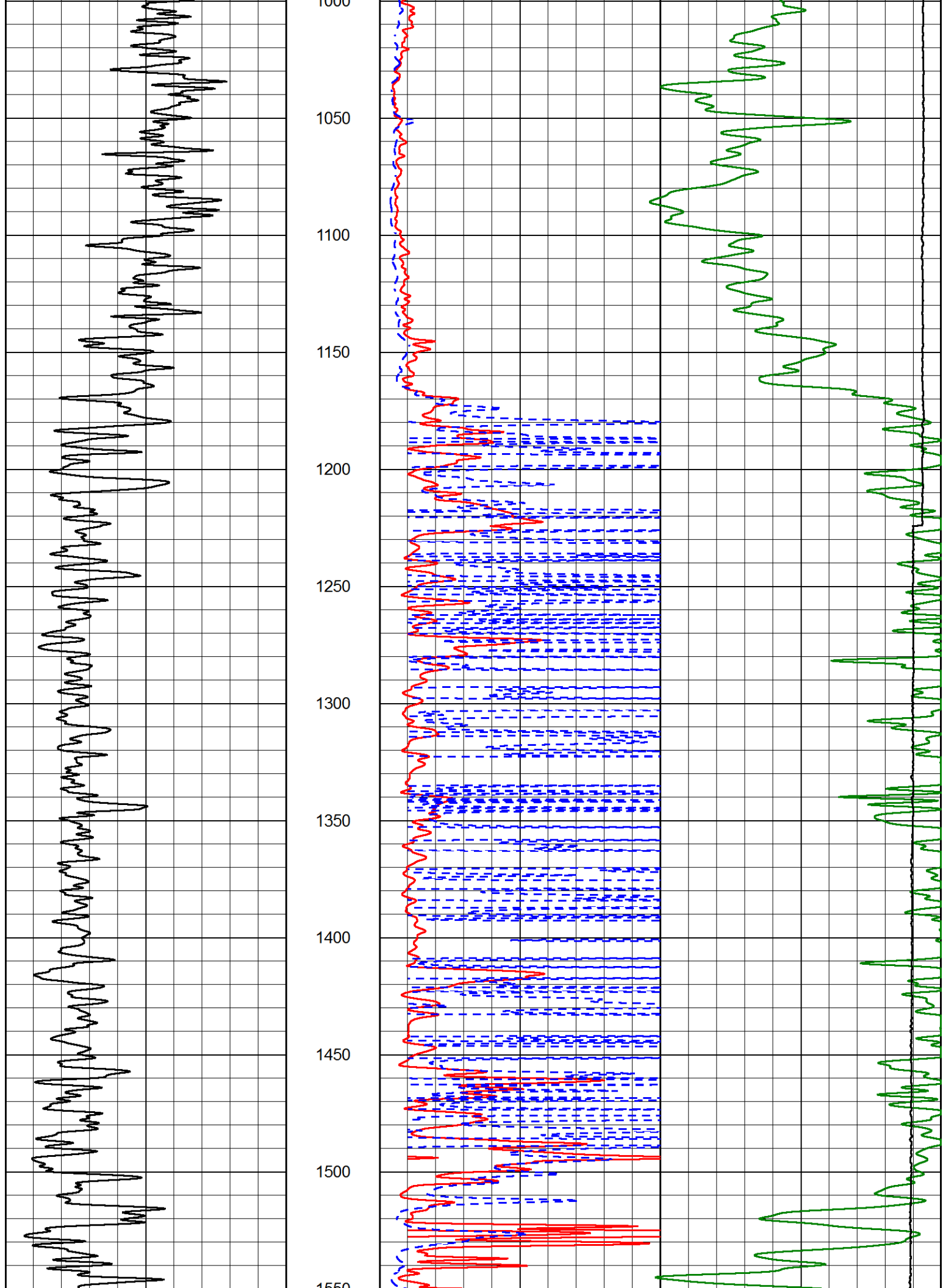
MAIN PASS

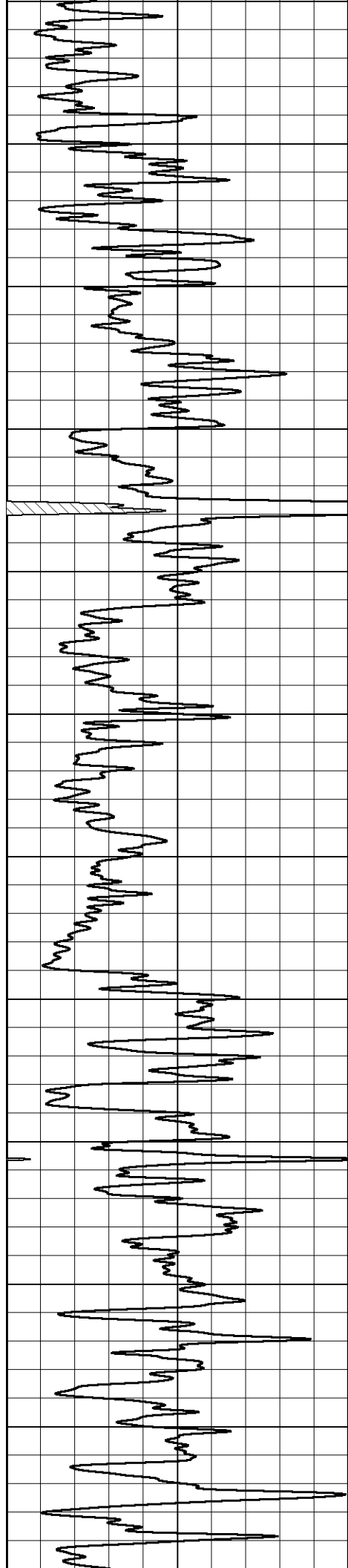
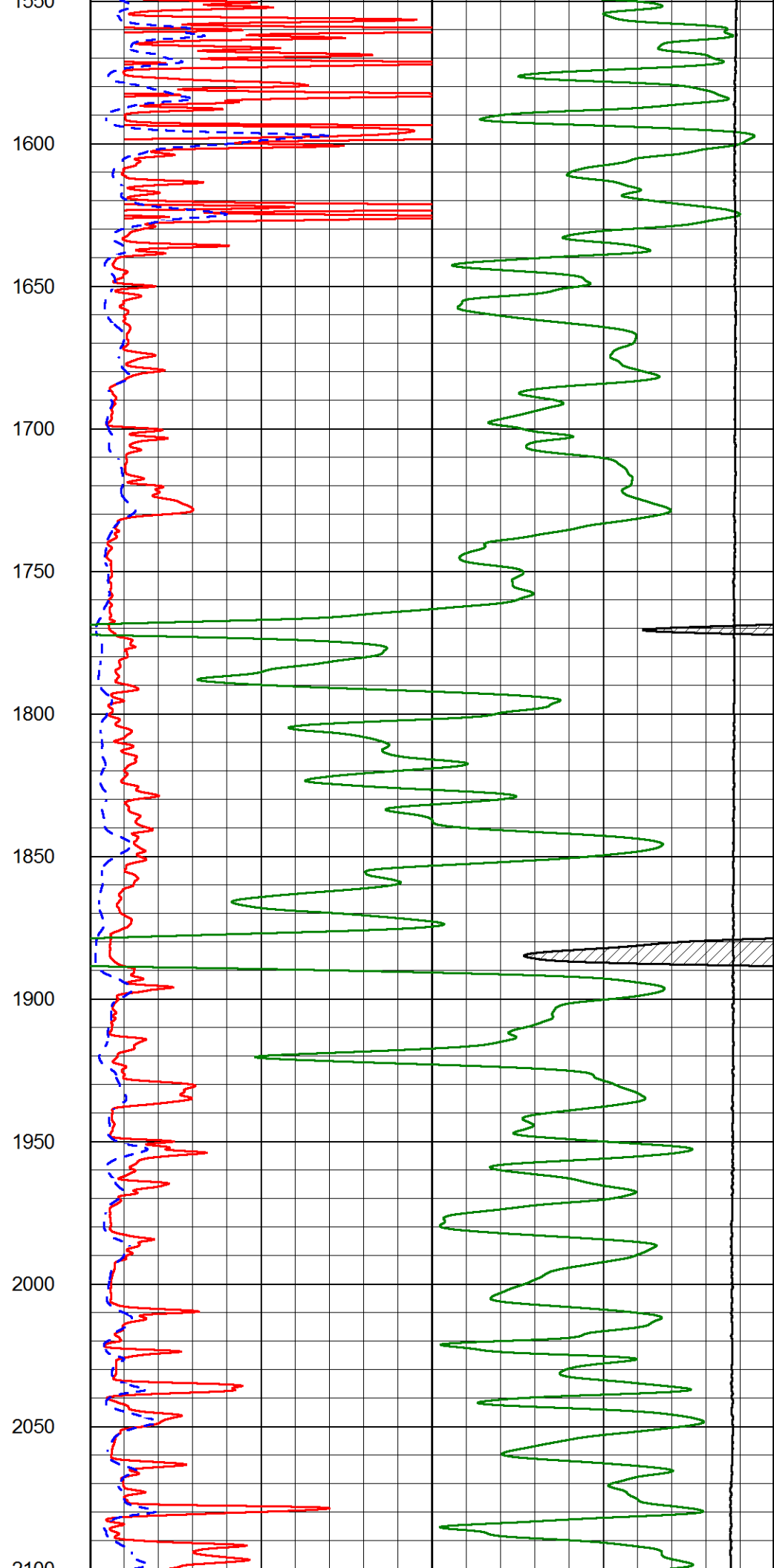
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Presentation Format _dil2in
Dataset Creation Wed Jul 21 02:56:14 2021
Charted by Depth in Feet scaled 1:600

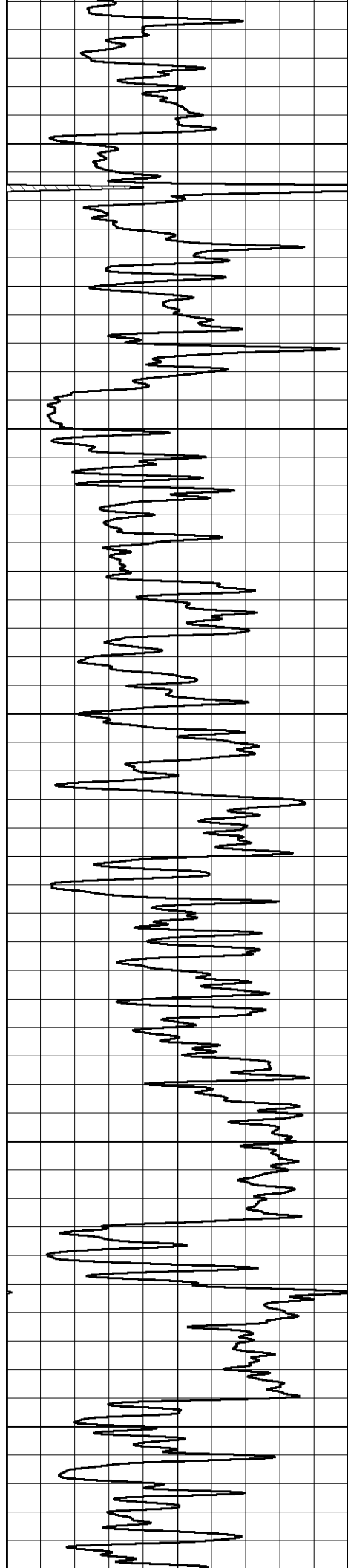
GAMMA RAY		1000 CONDUCTIVITY (mmho/m)		0
		15000 Line Tension (lb)		0
0	(GAPI)	0	RLL3 (Ohm-m)	50
		0	RILD (Ohm-m)	50
		50	RLL3 (Ohm-m)	100
		50	Deep Resistivity (Ohm-m)	200



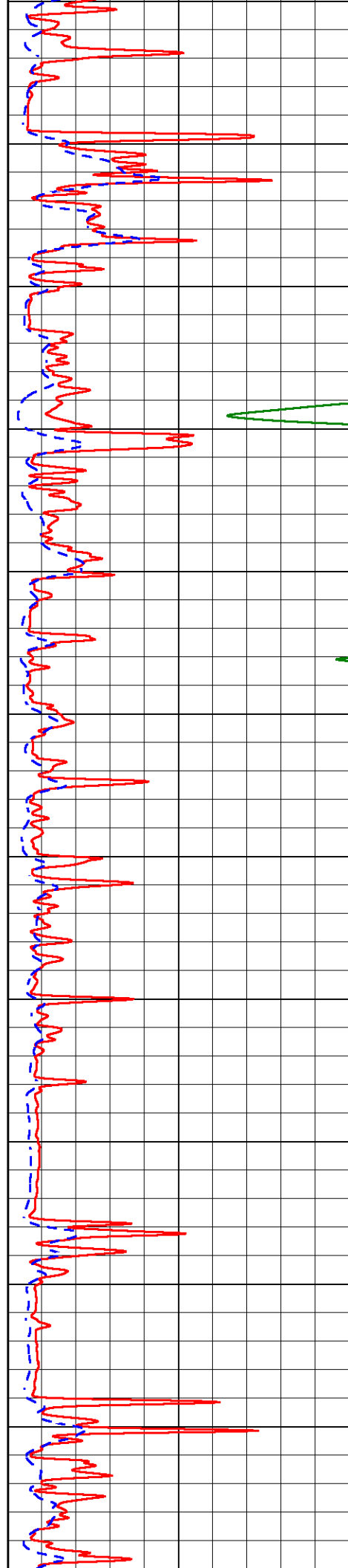
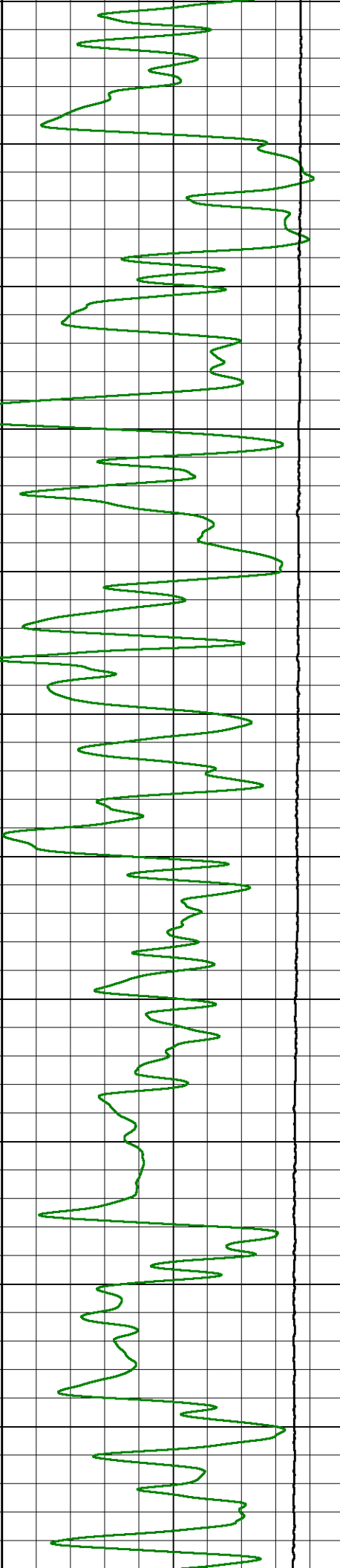


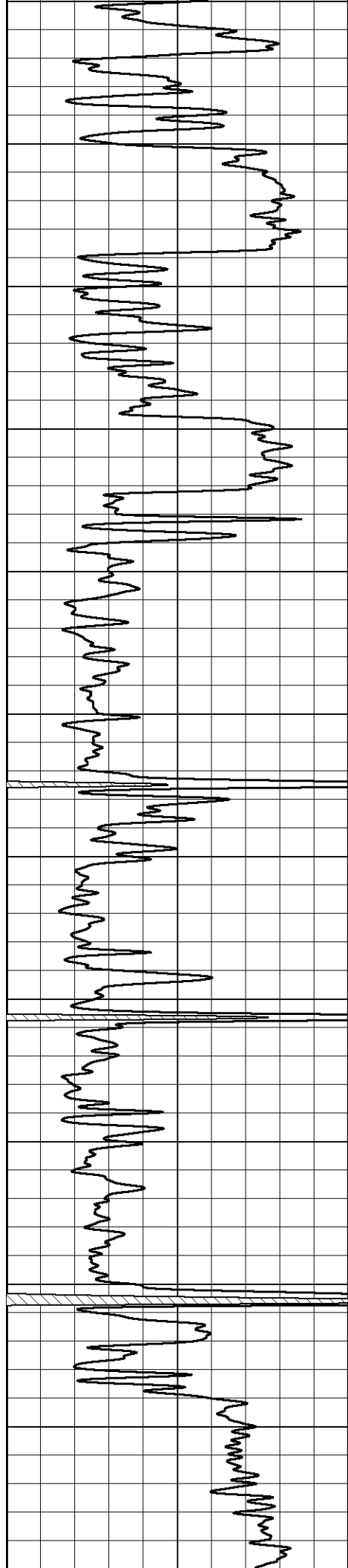




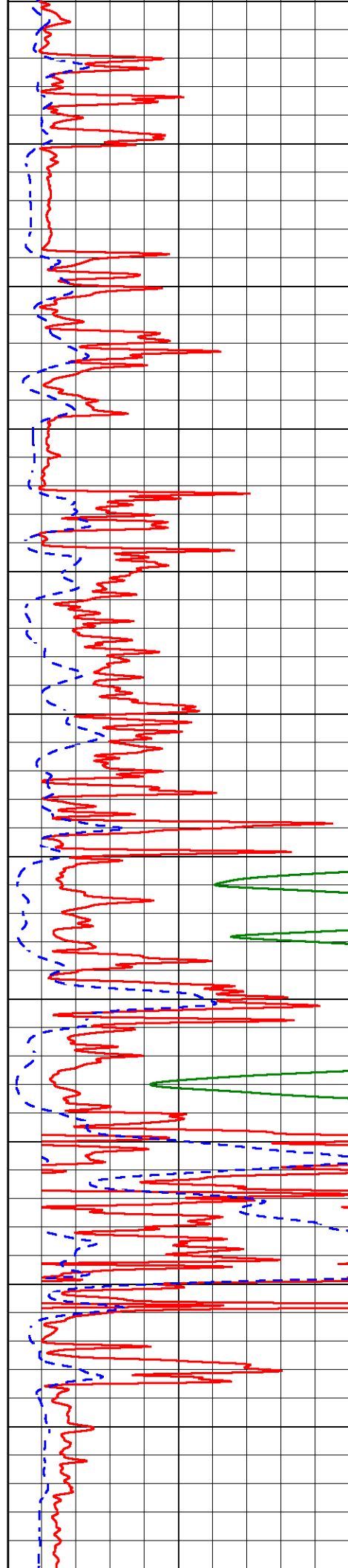
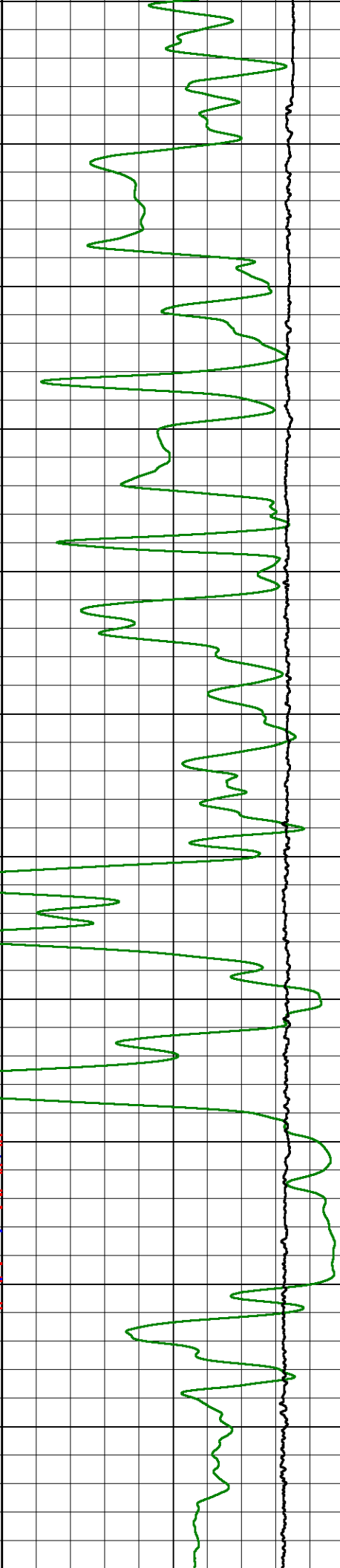


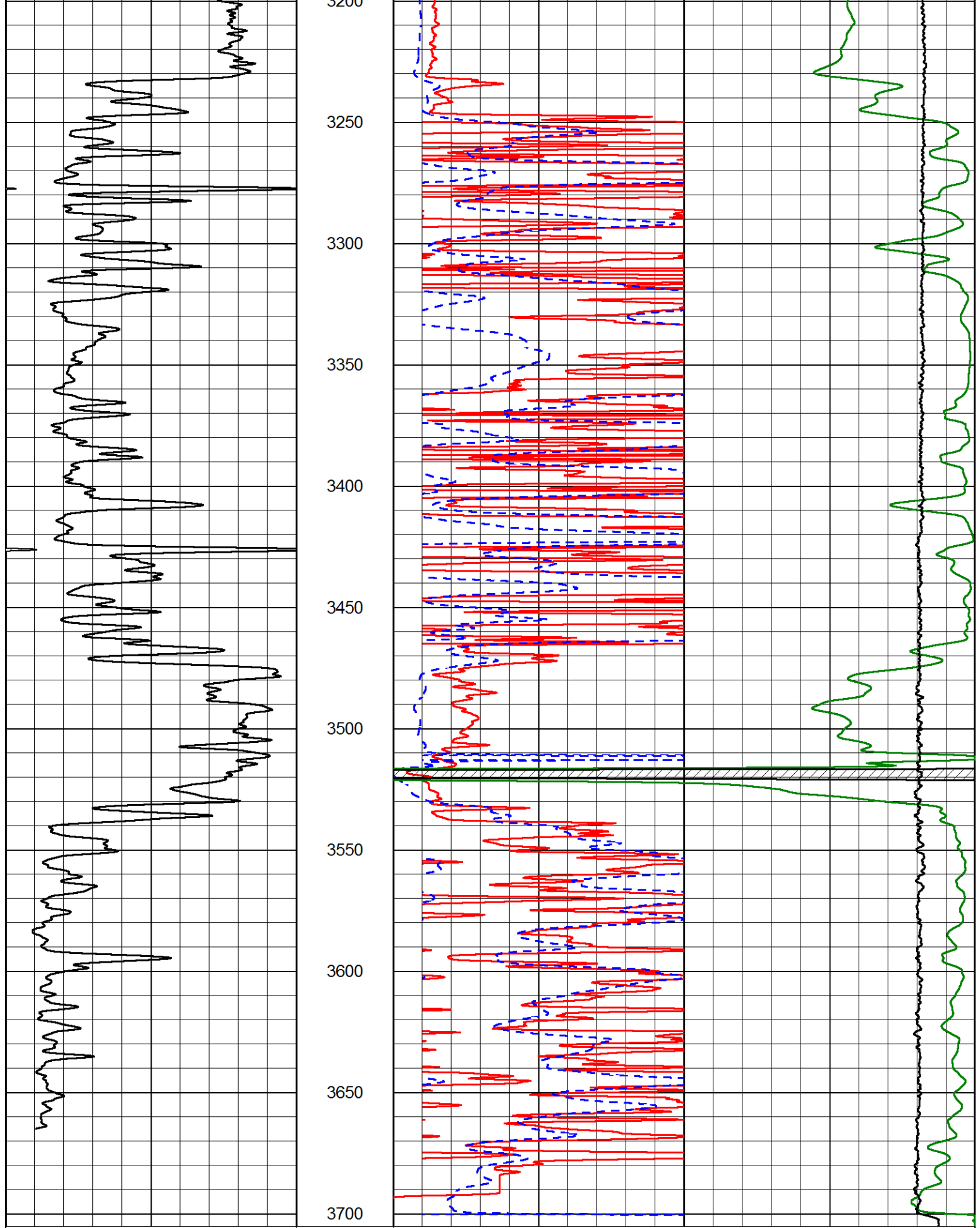
2100
2150
2200
2250
2300
2350
2400
2450
2500
2550
2600
2650





2650
2700
2750
2800
2850
2900
2950
3000
3050
3100
3150
3200





GAMMA RAY

CONDUCTIVITY (mmho/m)

0

Line Tension (lb)

0

0 (GAPI) 150

1000 15000 RLL3 (Ohm-m) 50

0 RILD (Ohm-m) 50

50	RLL3 (Ohm-m)	100
50	Deep Resistivity (Ohm-m)	200



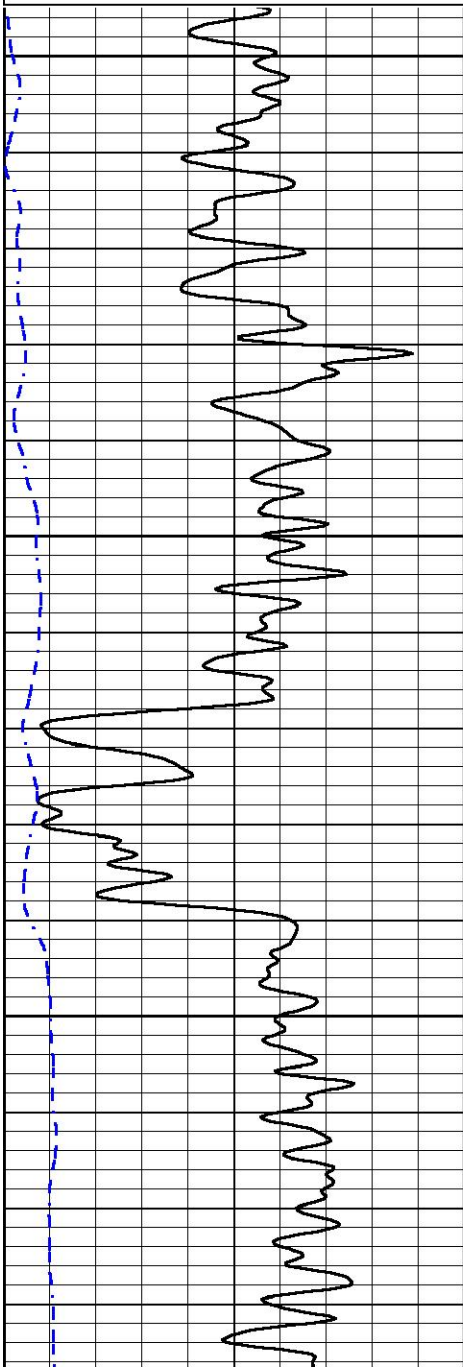
ANHYDRITE SECTION

MAIN PASS

Database File rama_hjb 1-20.db
Dataset Pathname stkml/pass6.1
Presentation Format _dil
Dataset Creation Wed Jul 21 02:56:21 2021
Charted by Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150
-200	SP (mV)	0

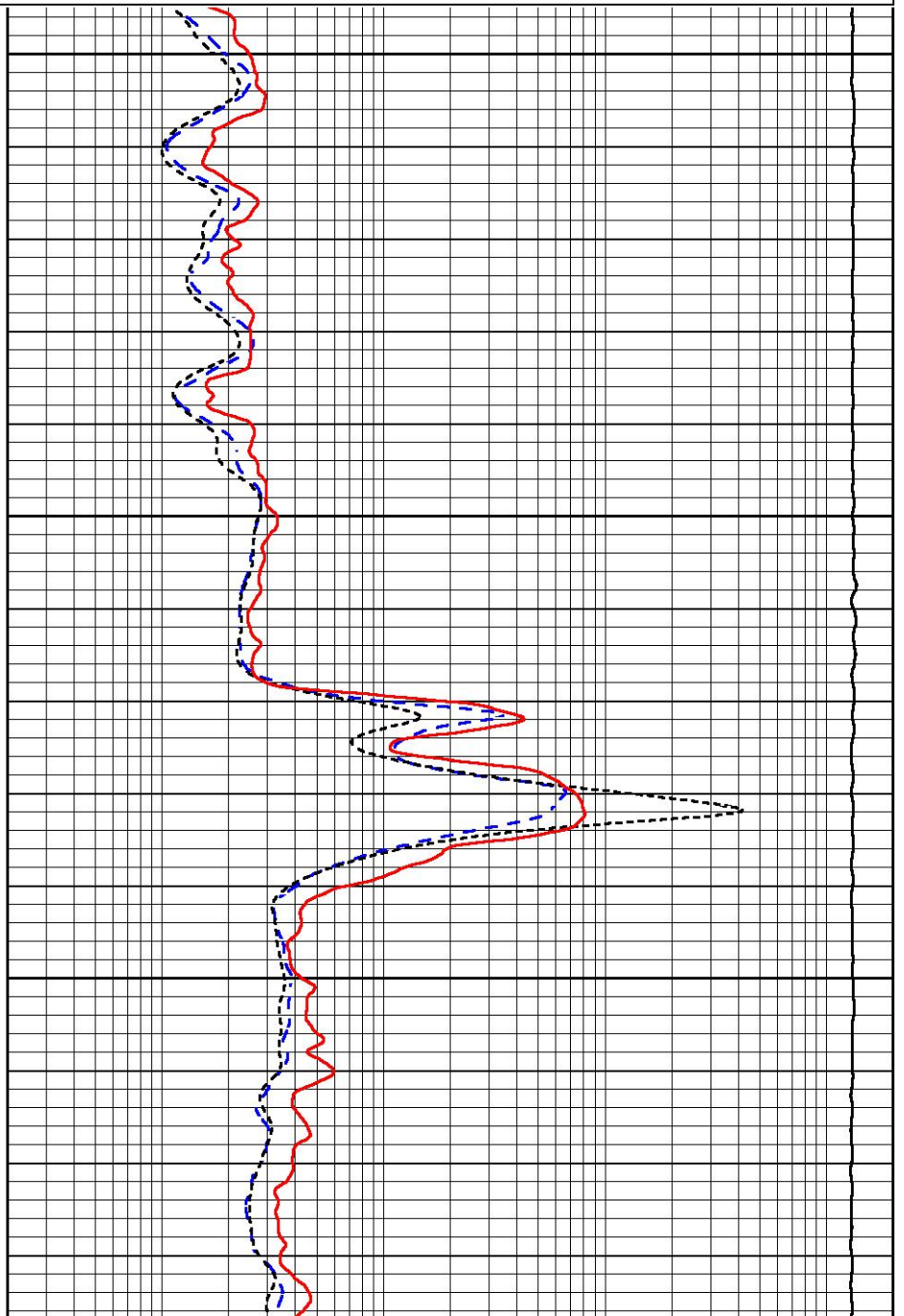
0.2	DEEP RESISTIVITY (Ohm-m)	2000
0.2	MEDIUM RESISTIVITY (Ohm-m)	2000
0.2	RLL3 (Ohm-m)	2000
10000	LINE TENSION (lb)	0

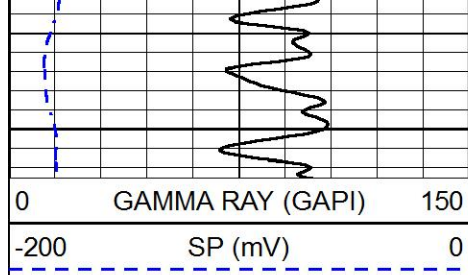


600

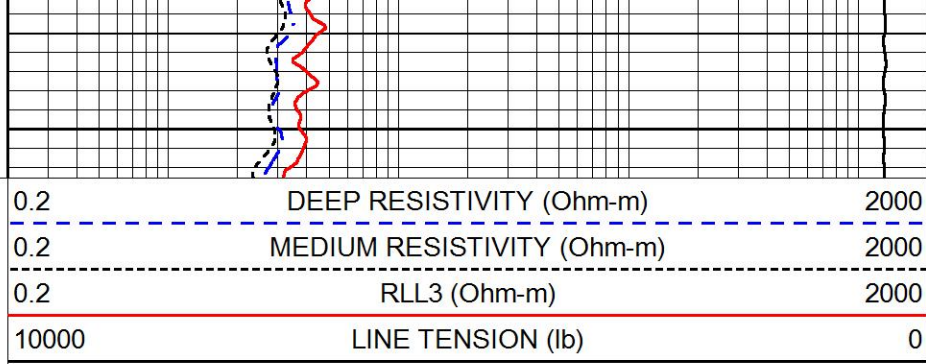
650

700





750

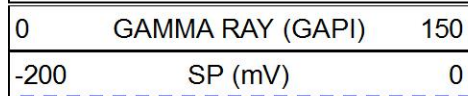
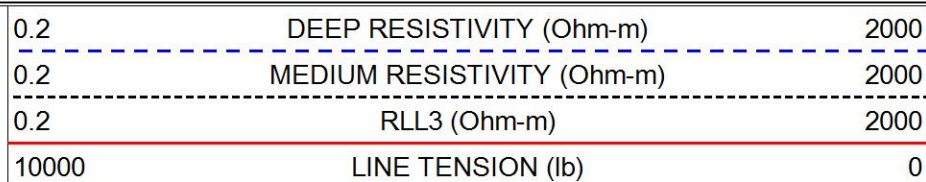
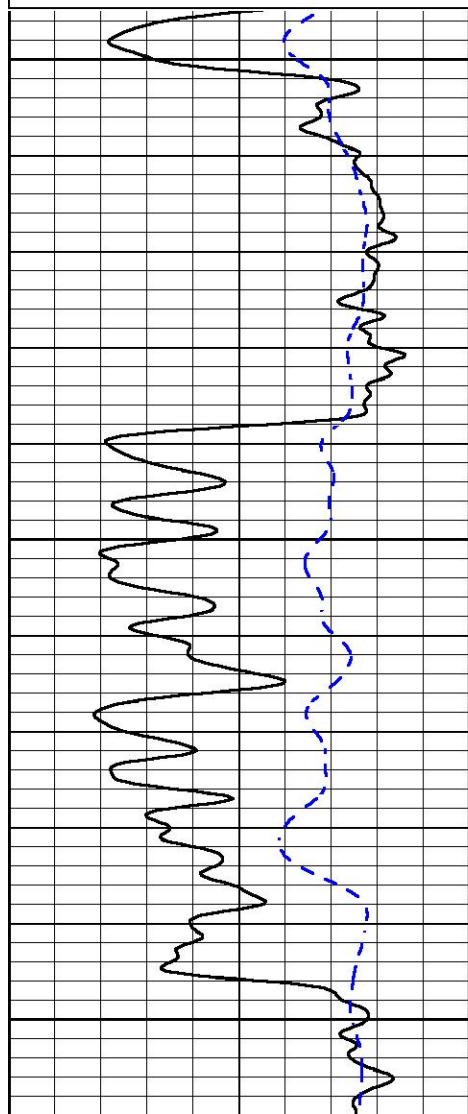


MIDWEST WIRELINE

DETAIL SECTION

MAIN PASS

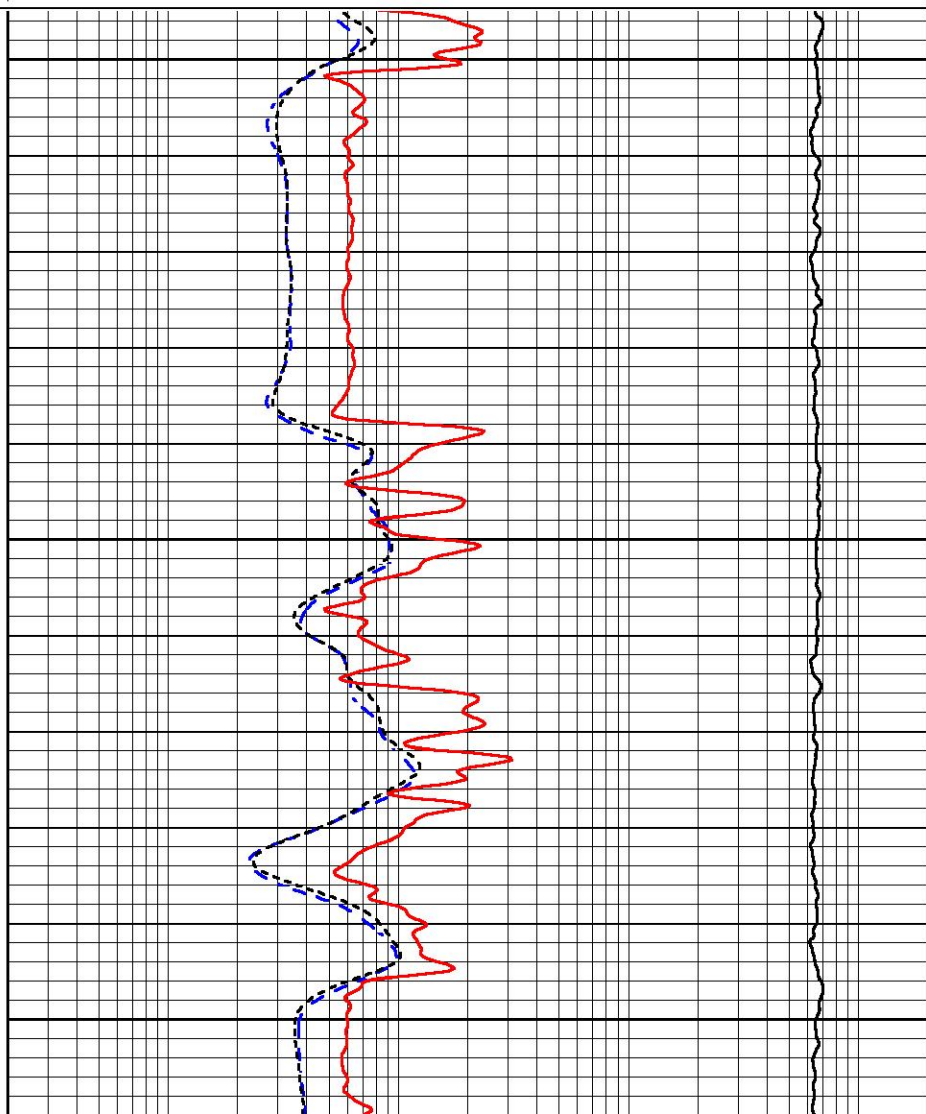
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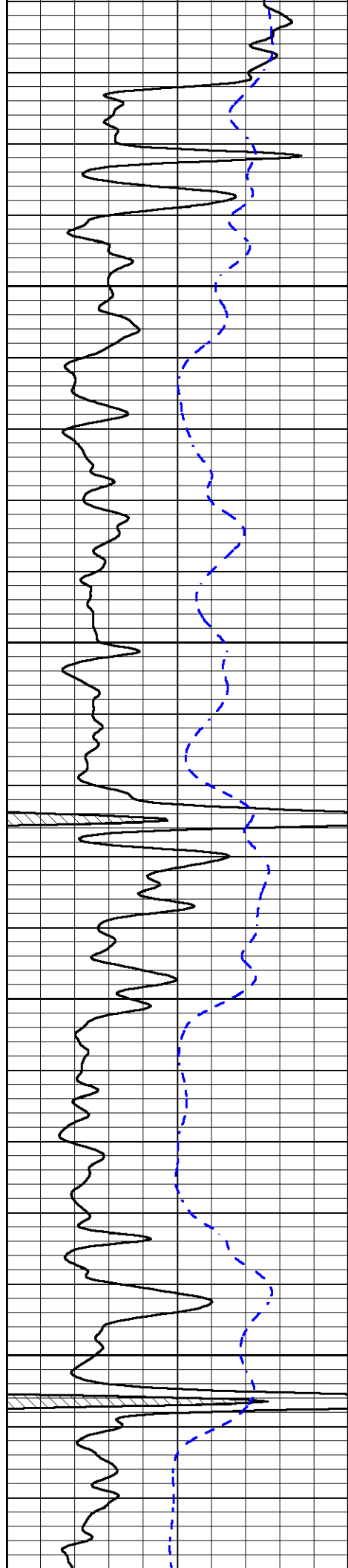


2700

2750

2800



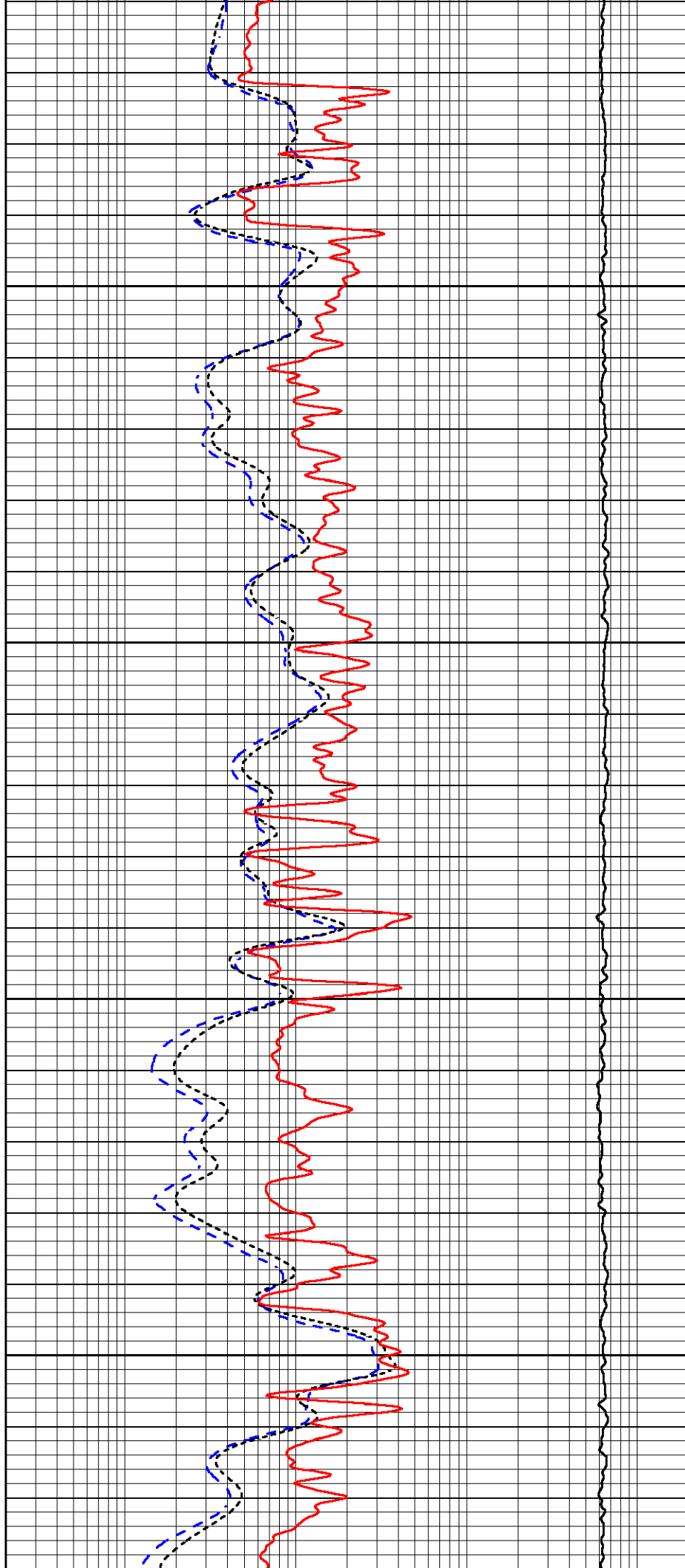


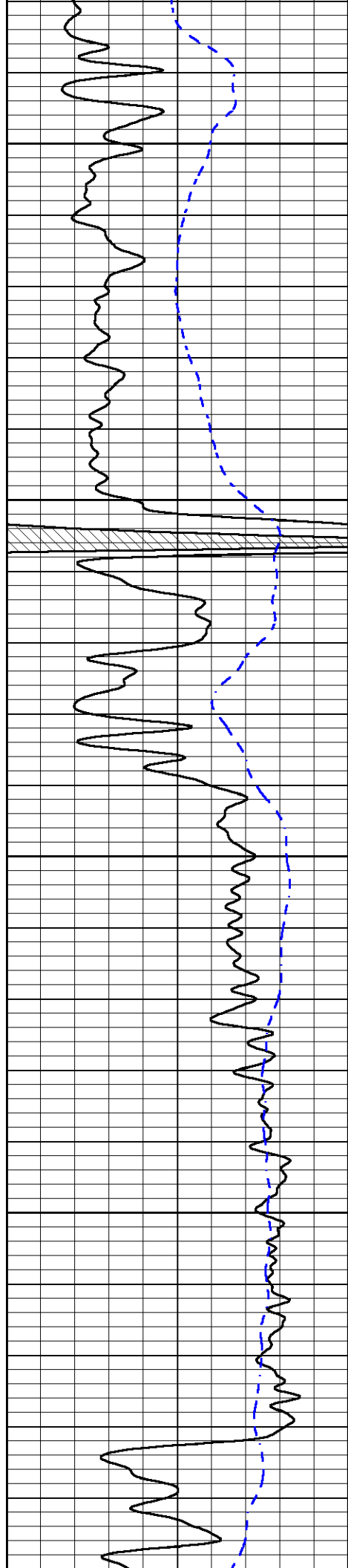
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2900

2950

3000





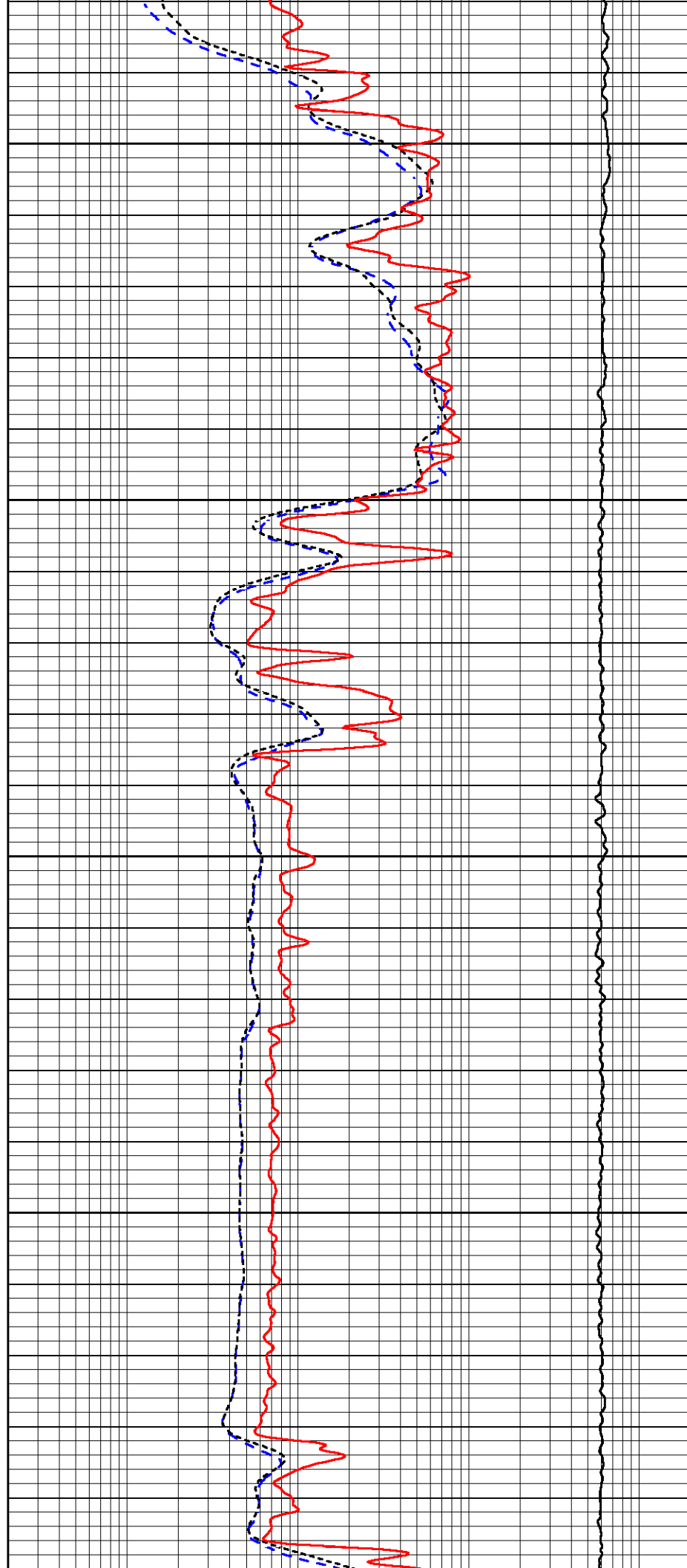
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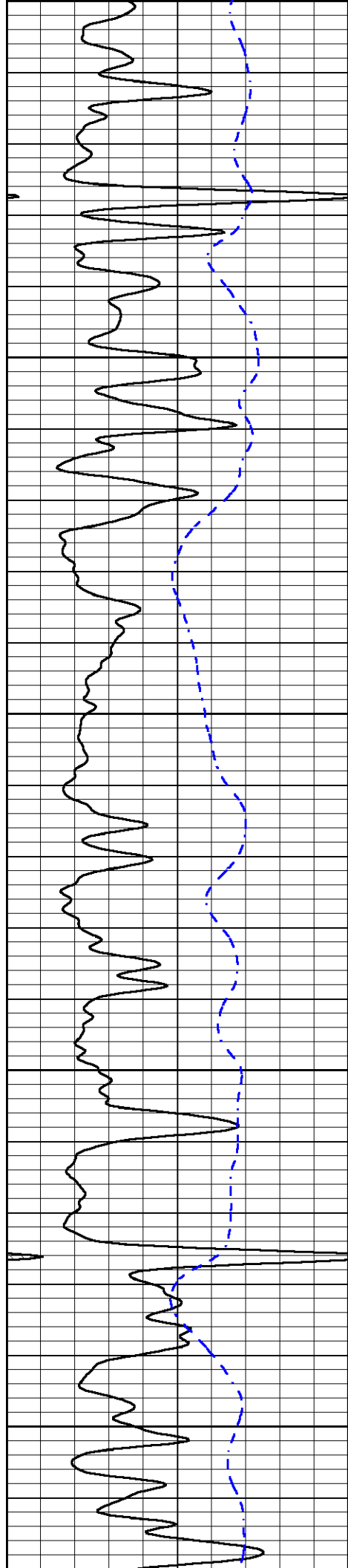
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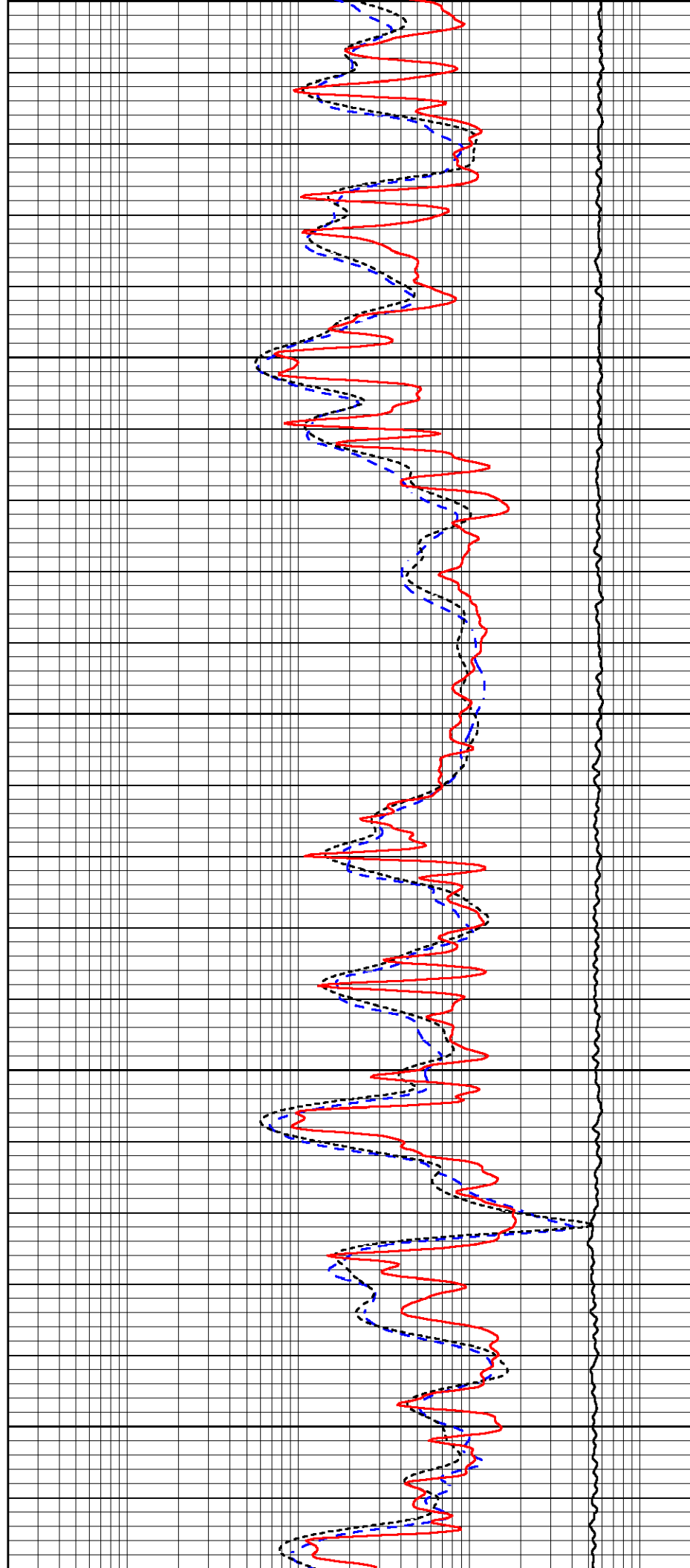
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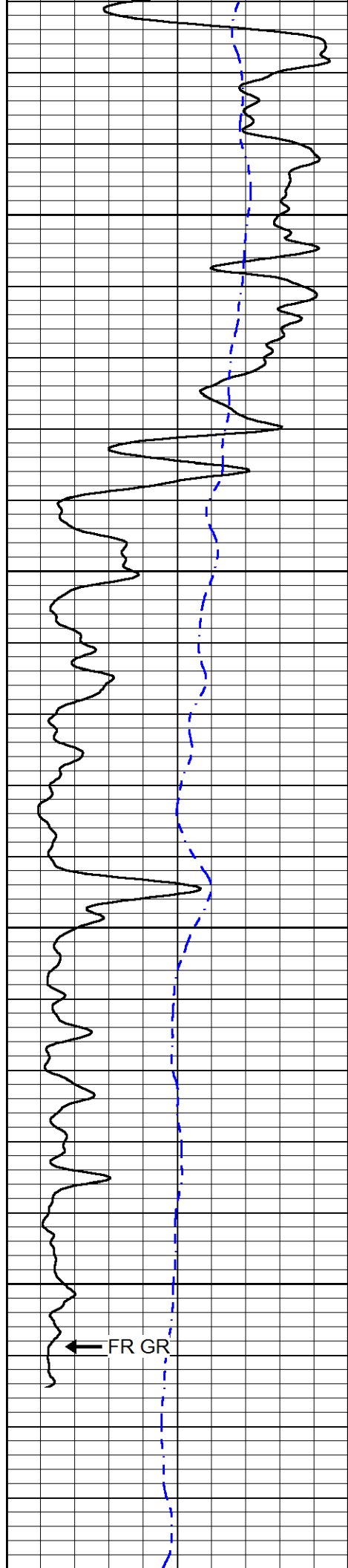
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3250
3300
3350
3400
3450



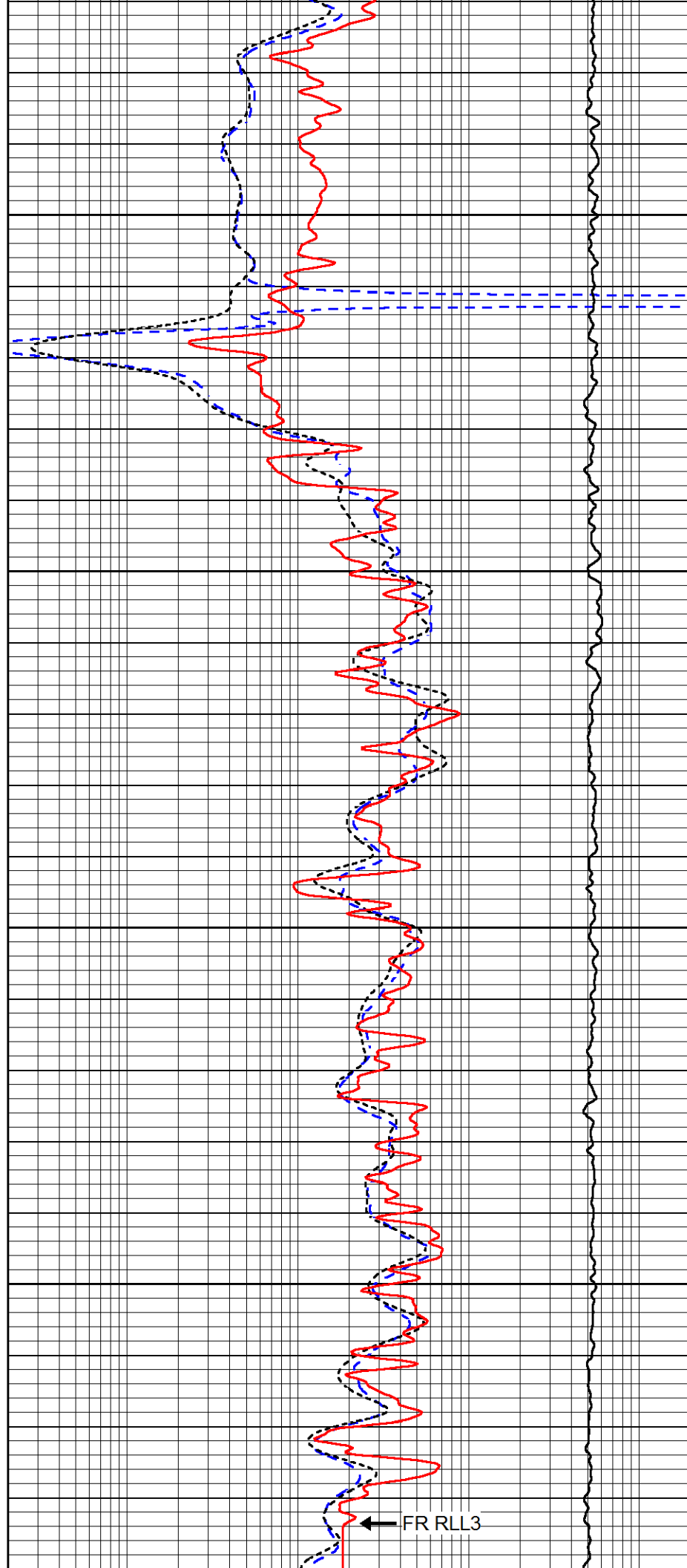


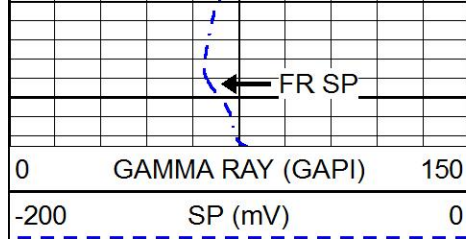
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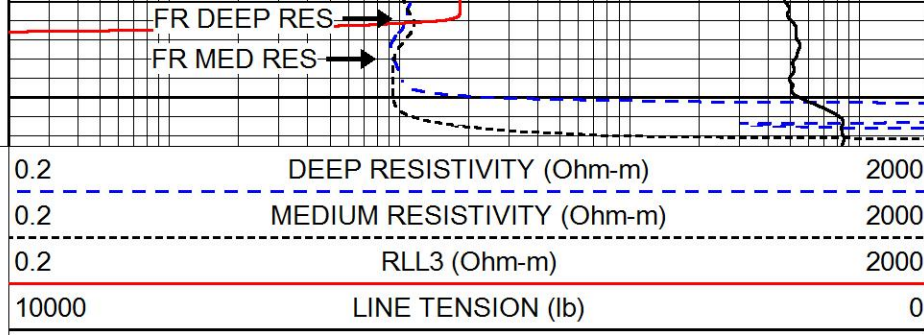
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3650





3700

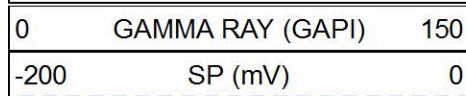


MIDWEST WIRELINE

REPEAT SECTION

REPEAT PASS

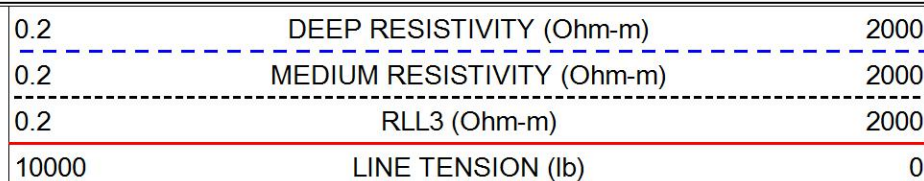
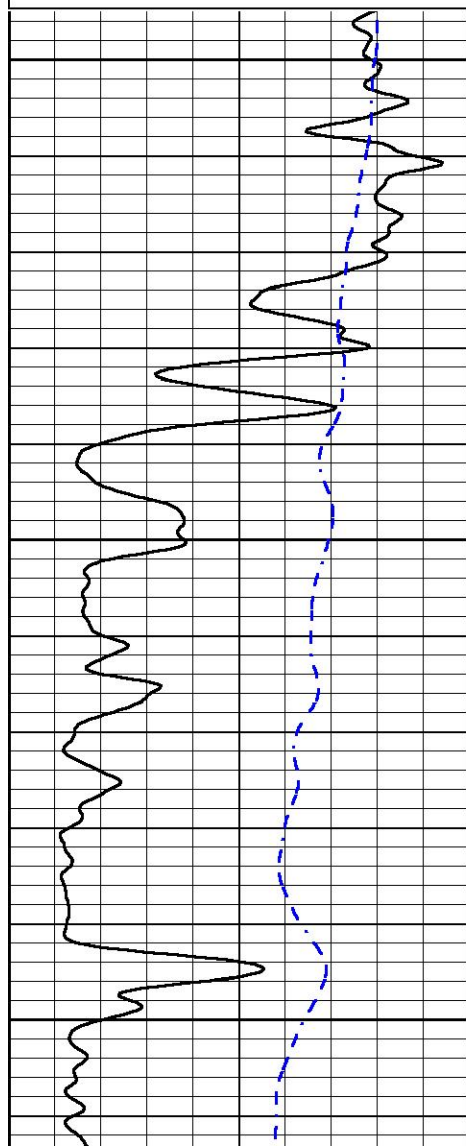
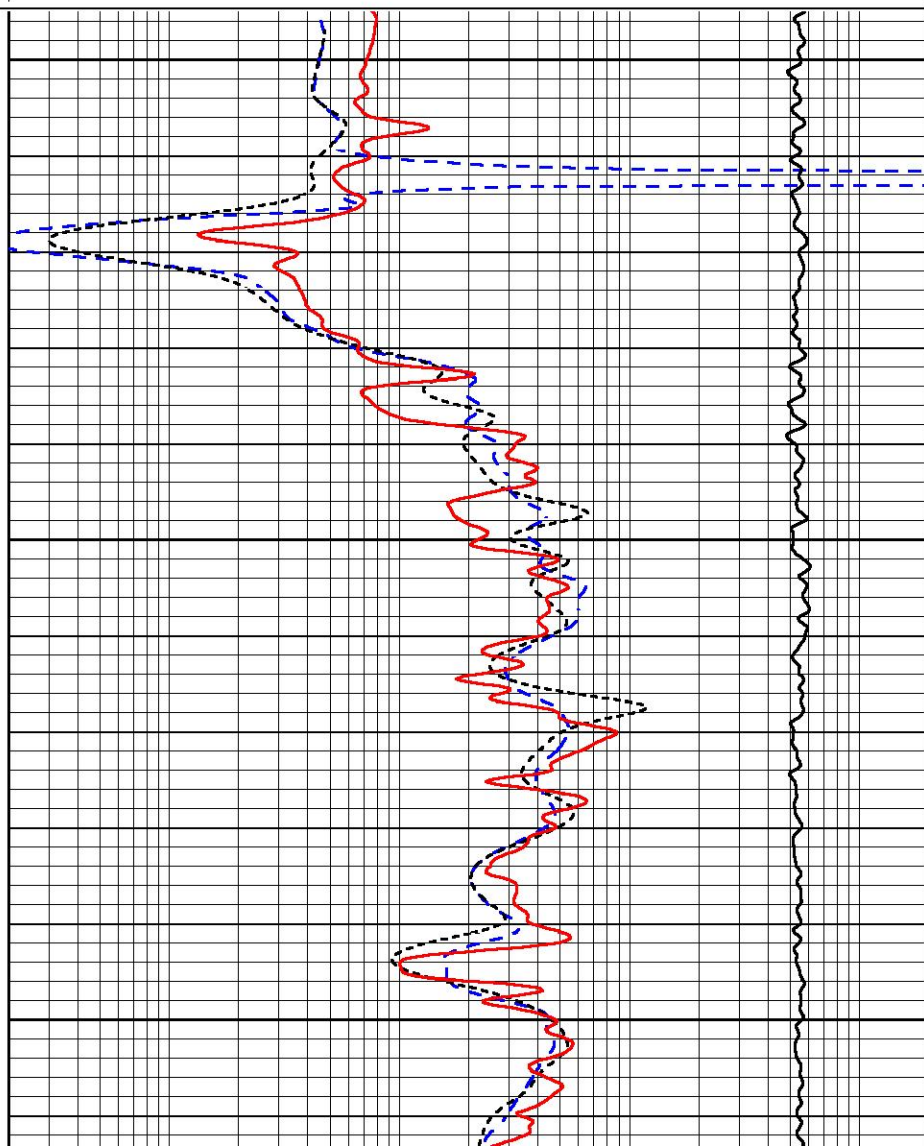
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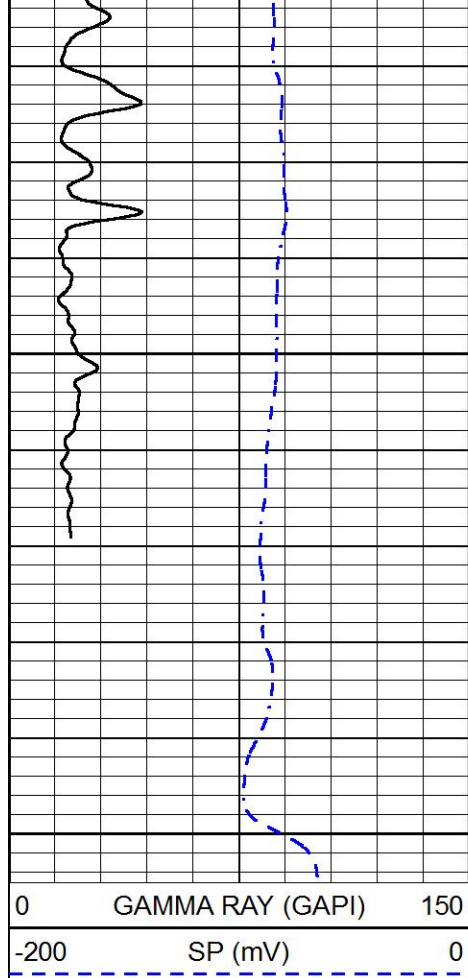


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3550

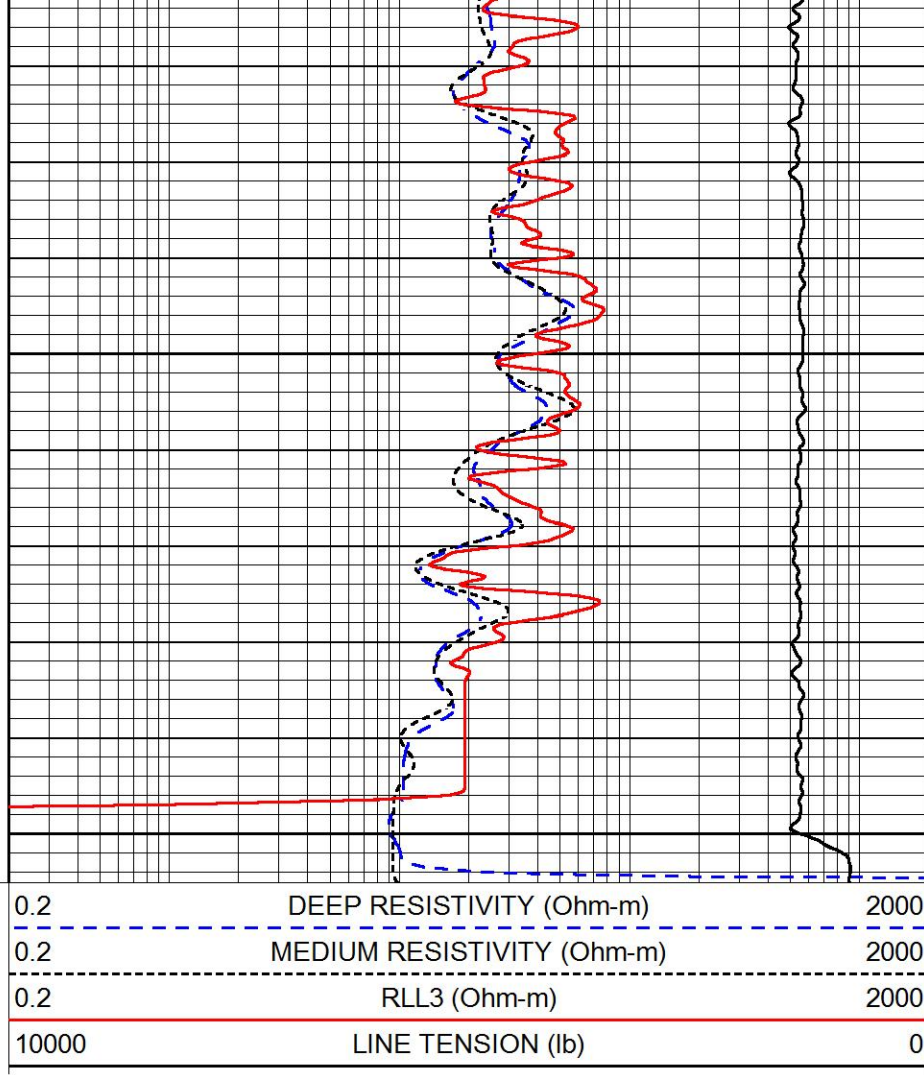
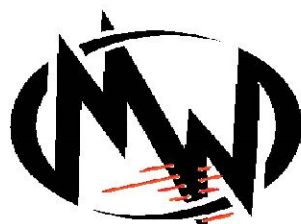
3600





3650

3700



MIDWEST WIRELINE

Company	RAMA Operating Co., Inc.
Well	HJB #1-20
Field	Mueller
County	Stafford
State	Kansas